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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,109	01/09/2002	Arnab Sarkar	VFA-70871	6061
30764	7590	09/10/2004		
SHEPPARD, MULLIN, RICHTER & HAMPTON LLP 333 SOUTH HOPE STREET 48TH FLOOR LOS ANGELES, CA 90071-1448			EXAMINER HOFFMANN, JOHN M	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/031,109		SARKAR, ARNAB	
	Examiner		Art Unit	
	John Hoffmann		1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-14, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election of Species C in the reply filed on 16 August 2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim 7 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 16 August 2004.

Claim 7 requires the outer shield gas is such that it is radially outward of the flame. Claim 7 is deemed to be directed to the species of the circular burner such as figures 8-9. Circles have radii – the oblong burner of species C (fig 12-14) has no radius. See page 13, line 9 which discloses radially outward orientation. However if “radially” was intended to mean – “like a ray”. Then it is noted that specie C at best has radially inward shield.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-6, 8-14 and 23-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “port” is indefinite as to its meaning. According to Examiner’s dictionary a port is an opening. However as can be seen from figures 8-9 (for example) 40a-c points to a tube rather than an opening. It is clear that applicant is using the term “port” to be broader in scope than a mere “opening”; however it is unclear as to what that broader scope is. It is well settled case law that if Applicant wishes to give a new definition to a term – such a definition must be clearly indicated in the specification. Also, it is new matter to add a new definition after the filing date.

Claim 1: line 13: there doesn’t appear to be antecedent basis for “the glass preform” because the preform isn’t part of the structure. The same applies to claim 13.

Furthermore, there is clearly no antecedent basis for “the site” of line 14 of claim 1. The same applies to claim 13, except that it is “the same location” – since there maybe more than one location if there are more than one stream: in other words one could not tell if the claim requires that there be exactly one location.

Claim 3: there is confusing antecedent basis for “auxiliary burners” – it is unclear whether they are additional auxiliary burners or if the claim further limits the auxiliary burners of claim 2.

Claim 5: there is no antecedent basis for "the flame" of line 6.

Claim 9: the term "asymmetrically" is indefinite as to its meaning. As per the top of page 15 of the present specification, it is indicated that various burner faces are asymmetric. From the drawing it is clear the faces have bi-lateral, planar, or mirror symmetry. It is not understood how one could call them asymmetric. Applicant must be using a special definition for "asymmetrically" but there is no indication what that is. One of ordinary skill would not be able to tell what is meant by the claims.

Claim 14: there is no antecedent basis for "the streams at the site of the preform" or for "the site of the preform". There is confusing antecedent basis for the streams of soot-forming reactants.

Claims 1 and 14 refer to reducing turbulence in the streams (of reactants) – however it would seem to Examiner "at the site of the preform" the streams of reactants no longer exists. This is because the reactants no longer exists – they would have been converted to soot.

From the MPEP:

**** WRITTEN DESCRIPTION ** NECESSARY TO SUPPORT A CLAIM LIMITATION WHICH INVOKES 35 U.S.C. 112, SIXTH PARAGRAPH**
>35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language "shall be construed to cover the corresponding structure...described in the specification and equivalents thereof." "If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." In re Donaldson Co., 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc).
The proper test for meeting the definiteness requirement is that the corresponding structure (or material or acts) of a means (or step)-plus-function limitation must be disclosed in the specification itself in a way that one skilled in the art will understand what structure (or material or acts) will perform the recited function. See Atmel Corp. v. Information Storage Devices, Inc., 198 F.3d 1374, 1381, 53 USPQ2d 1225, 1230

(Fed. Cir. 1999).

Claims 23-24 have means-plus-function limitations. There is no mention of the “means” in the specification. Thus the specification fails to show what is meant by the language. Therefore applicant has failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The terms “divergent reactant ports” and “means for supplying reactant gases...” that are found in the claims must also be included in the specification so that one can refer to the specification to determine what is covered by the claims. .

Claim Objections

Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 8 requires the ports direct the flame towards the central burner. However claim 9 requires the flame to be parallel to the central axis. Claim 9 is of a different – mutually exclusive scope – from that of claim 8. Claim 9 must further limit – it cannot take it to a completely new scope.

Claim 9 is not further treated on its merits.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 10-14 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berkey 4486212 in view of Spainhour 4317667.

Berkey discloses the invention as claimed – except for the chamber. As per col. 1, lines 13-48 it is known to make fiber preforms in a chamber so as to prevent escape of contaminants. It would have been obvious to perform the Berkey process in a chamber so as to prevent the escape of contaminants.

Figure 1 of Berkey shows the mandrel 20 – it is inherent that it is supported. Figure 11 shows the orifices 80' which would have been on either side of the preform to quasi-tangentially impinge on the preform. The claim phrases “to reduce turbulence...” and “such that the two streams...” reasonably signify intentions. A recitation of the intended use of the claimed invention must result in a structural

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difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Impinging and turbulence related limitations are method limitations not structural.

There is a ring of orifices 80' – the claim is open to other ports/orifices that do not quasi-tangentially strike the mandrel/preform.

Claim 2: see col. 4, lines 38-45. It would have been obvious to have all the features automatically controlled as well as having a controller which does the controlling, because such would be more accurate than doing so manually. It would have been obvious to have the controller do the controlling at all times – including whenever the size is at any predetermined size.

Claim 3: see figure 3 of Spainhour. One could use those structures to form flames – it is only a matter of intended use. Alternatively, Berkey refers to “one or more” auxiliary burners. It is clear that Berkey is directed to having more than two – otherwise it would say “one or two”. It would have been obvious to have at least two on each side and it would have been further obvious to have them on opposite sites so as to have the heat evenly balanced.

Claim 4: it would have been obvious to make the burner adjustable, so that one can choose the optimal placement.

Claim 5: It is deemed that 84' are the flame ports. The "for forming the flame..." is an intended use limitation which does not define over the Berkey- Spainhour combination.

Claim 6: 82' are the shield gas ports.

Claim 10: it would have been obvious to have valves connected to all feeding passageways, so that one can turn of the burner when one is finished – and to adjust the feed rates so as to get the optimal rates.

Claims 11-12: Such mixtures burn easily. Any conduit is inherently configured to burn such mixtures.

Claim 13 is met as per the reasons given above. As to the "the same longitudinal location" limitation. First it is noted that there is no antecedent basis for any "location" – during a typical process, the burner impinges against many locations at different times – as the burner sweeps the length of the mandrel. It would have been obvious to have the Berkey-Spainhour apparatus adjustable enough that one could heat any longintundal location of the preform/mandrel with the auxiliary burner either before or after the soot is deposited. Claim 14 is clearly met.

Claims 23-24. As indicated above, it is unclear what is meant by the means-plus-function language. It is deemed that the conduits that are used in Berkey are such means because they are means for transporting fluids.

Claims 1, 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cain 5922100 in view of Spainhour 4317667.

Similar to the Berkey- Spainhour combination: it would have been obvious to perform the Cain OVD method within a chamber so as to prevent contamination.

Looking to figure 6 of Cain: 90 is the central reactant port 92 or 168 are the divergent reactant ports. They diverge in the reverse direction. Alternatively, they define axes that diverge from the burners central axis – after they cross the axis. The axes are not actual structure – they continue on indefinitely. They first converge at the central axis, and then diverge.

Claims 5 and 8 are clearly met.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

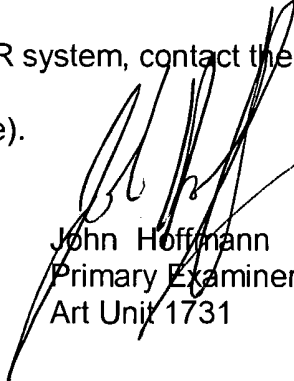
Moltzan, Blackwell, Kanao, Hawtof, Anderson, and Ball are cited as being similar to the disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

9-7-04

jmh